

Application No: 10/810,019

Docket No.: Q198-US1

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IN THE CLAIMS**RECEIVED
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Please amend the claims as follows:

1. (original) An electrochemical device, comprising:
an electrolyte including a polysiloxane having a backbone, the backbone including one or more terminal silicons linked to at least one side chain that includes a poly(alkylene oxide) moiety or a carbonate moiety.
2. (original) The device of claim 1, wherein the at least one side chain includes the carbonate moiety.
3. (original) The device of claim 2, wherein the carbonate moiety is a cyclic carbonate moiety.
4. (original) The device of claim 1, wherein the at least one side chain includes the poly(alkylene oxide) moiety.
5. (original) The device of claim 4, wherein an organic spacer is positioned between the poly(alkylene oxide) moiety and the backbone.
6. (withdrawn) The device of claim 1, wherein each of the terminal silicons are linked to at least one side chain that includes the poly(alkylene oxide) moiety.
7. (withdrawn) The device of claim 1, wherein each silicon on the polysiloxane backbone is linked to at least one side chain that includes the poly(alkylene oxide) moiety.
8. (original) The device of claim 1, wherein a terminal silicon is linked to at least one side chain that includes the poly(alkylene oxide) moiety and another terminal silicon is linked to at least one side chain that includes the carbonate moiety.

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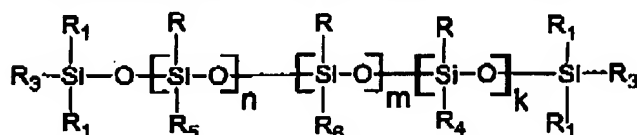
9. (withdrawn) The device of claim 1, wherein each terminal silicon is linked to at least one side chain that includes the carbonate moiety.

10. (withdrawn) The device of claim 9, wherein each non-terminal silicon is linked to at least one side chain that includes a poly(alkylene oxide) moiety.

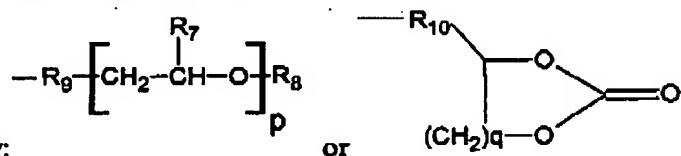
11. (original) The device of claim 1, wherein one or more of the silicons are linked to a cross link that links the backbone of the polysiloxane to a backbone of another polysiloxane.

12. (original) The device of claim 1, wherein the at least one side chain includes an oxygen linked to a silicon on the backbone.

13. (original) The device of claim 1, wherein the polysiloxane is represented by:

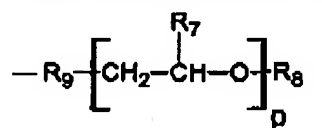


where R is alkyl or aryl; R₁ is alkyl or aryl;

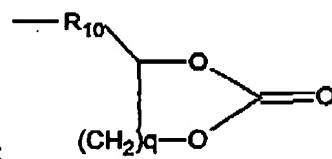


R₃ is represented by:

R₄ is a cross link that links the polysiloxane backbone to another polysiloxane backbone;



R₅ is represented by:



R₆ is represented by:

R₇ is hydrogen; alkyl or aryl; R₈ is alkyl or aryl; R₉ is oxygen or an organic spacer; R₁₀ is an oxygen or an organic spacer; k is greater than or equal to 0; p is 3 to 20; q is 1 to 2; m is greater than or equal to 0 and n is 2 to 25.

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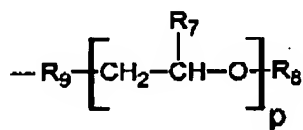
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14. (original) The device of claim 13, wherein a ratio of n:m is in a range of 10:1 to 100:1.

15. (original) The device of claim 13, wherein k is greater than 0 and a ratio of the number of cross links to (m+n) is in a range of 1:6 to 1:70.

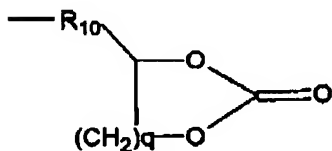
16. (original) The device of claim 13, wherein at least one R₃ is represented



by:

17. (original) The device of claim 16, wherein R₉ is an organic spacer.

18. (original) The device of claim 13, wherein at least one R₃ is represented by:



19. (original) The device of claim 13, wherein at least one R₃ has a different structure from another R₃.

20. (original) The device of claim 13, wherein each R₃ has a different structure from each R₅ and from each R₆.

21. (original) The device of claim 1, wherein the average molecular weight for the polysiloxane is less than or equal to 3000 g/mole.

22. (original) The device of claim 1, wherein the electrolyte includes lithium ions, and wherein a [O]/[Li] ratio is 5 to 50, [O] being the molar concentration of the active oxygens in the electrolyte and [Li] being the molar concentration of the lithium ions in the electrolyte.

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23. (original) The device of claim 1, wherein the electrolyte is a liquid.
24. (withdrawn) The device of claim 1, wherein the electrolyte is a solid.
25. (original) The device of claim 1, wherein the polysiloxane is cross linked.
26. (original) The device of claim 1, wherein the polysiloxane is a member of an interpenetrating network.
27. (original) The device of claim 1, wherein the electrolyte has a conductivity better than 1.0×10^{-4} S/cm at 25 °C.
- 28.-54. (canceled)